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***** Welcome to STN International *****

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 NEWS 4 JAN 28 USPATFULL, USPATL, and USPATOLD enhanced with new
 custom IPC display formats
 NEWS 5 JAN 28 MARPAT searching enhanced
 NEWS 6 JAN 28 USGENE now provides USPTO sequence data within 3 days
 of publication
 NEWS 7 JAN 28 TOXCENTER enhanced with reloaded MEDLINE segment
 NEWS 8 JAN 28 MEDLINE and LMEEDLINE reloaded with enhancements
 NEWS 9 FEB 08 STN Express, Version 8.3, now available
 NEWS 10 FEB 20 PCI now available as a replacement to DPCI
 NEWS 11 FEB 25 IFIREF reloaded with enhancements
 NEWS 12 FEB 25 IMSPRODUCT reloaded with enhancements
 NEWS 13 FEB 29 WFINDEX/WPIDS/WPIX enhanced with ECLA and current
 U.S. National Patent Classification
 NEWS 14 MAR 31 IFICDB, IFIPAT, and IFIUDB enhanced with new custom
 IPC display formats
 NEWS 15 MAR 31 CAS REGISTRY enhanced with additional experimental
 spectra
 NEWS 16 MAR 31 CA/CAPLUS and CASREACT patent number format for U.S.
 applications updated
 NEWS 17 MAR 31 LPCI now available as a replacement to LDPCI
 NEWS 18 MAR 31 EMBASE, EMBAL, and LEMBAGE reloaded with enhancements
 NEWS 19 APR 04 STN AnaVist, Version 1, to be discontinued
 NEWS 20 APR 15 WPIDS, WFINDEX, and WPIX enhanced with new
 predefined hit display formats
 NEWS 21 APR 28 EMBASE Controlled Term thesaurus enhanced
 NEWS 22 APR 28 IMRESEARCH reloaded with enhancements
 NEWS 23 MAY 30 INPAPANDB now available on STN for patent family
 searching
 NEWS 24 MAY 30 DGENE, PCTGEN, and USGENE enhanced with new homology
 sequence search option
 NEWS 25 JUN 06 EPFULL enhanced with 260,000 English abstracts
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***** STN Columbus *****

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=> file reg		
COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	0.21	0.21

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STRUCTURE FILE UPDATES: 6 JUN 2008 HIGHEST RN 1026208-38-7
 DICTIONARY FILE UPDATES: 6 JUN 2008 HIGHEST RN 1026208-38-7

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ISCA INFORMATION NOW CURRENT THROUGH January 9, 2008.

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<http://www.cas.org/support/stngen/stndoc/properties.html>

```
=> e 7512-17-6/rn
E1      1      7512-15-4/RN
E2      1      7512-16-5/RN
E3      1  --> 7512-17-6/RN
E4      1      7512-18-7/RN
E5      1      7512-19-8/RN
E6      1      7512-20-1/RN
E7      1      7512-21-2/RN
E8      1      7512-22-3/RN
E9      1      7512-23-4/RN
E10     1      7512-24-5/RN
E11     1      7512-25-6/RN
E12     1      7512-26-7/RN

=> s e3
L1      1 7512-17-6/RN

=> d l1
L1      ANSWER 1 OF 1 REGISTRY COPYRIGHT 2008 ACS ON STN
RN      7512-17-6 REGISTRY
ED      Entered STN: 16 Nov 1984
CN      D-Glucose, 2-(acetylamino)-2-deoxy- (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN      D-Glucose, 2-acetamido-2-deoxy- (SCI)
OTHER NAMES:
CN      2-Acetamido-2-deoxy-D-glucose
CN      2-Acetamido-2-deoxyglucose
CN      2-Acetamido-D-glucose
CN      2-Acetylamino-2-deoxy-D-glucose
CN      Acetylglucosamine
CN      D-N-Acetylglucosamine
CN      Marine Sweet
CN      N-Acetyl-2-amino-2-deoxy-D-glucose
CN      N-Acetyl-2-amino-2-deoxyglucose
CN      N-Acetyl-5-glucosamine
CN      N-Acetylglucosamine
CN      NSC 524344
FS      STEREOSEARCH
DR      948887-87-4, 7132-76-5, 134-61-2, 173382-53-1, 98632-70-3
MF      C8 H15 N O6
CI      COM
LC      STN Files: ADISNENS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOSIS, BIOTECHNO,
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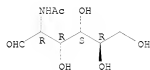
CA, CABA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CIN, CSCEM,
 EMBASE, IFICDB, IFIPAT, IFIUDS, IPA, MEDLINE, MRCK*, MSDS-OHS,
 NAPRALERT, PIRA, PROMT, RTECS*, SPECINFO, TOXCENTER, USPAT2, USPATFULL,
 USPATOLD

(*File contains numerically searchable property data)

Other Sources: DSL**, EINECS**, TSCA**

(*Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

6962 REFERENCES IN FILE CA (1907 TO DATE)
 510 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 6966 REFERENCES IN FILE CAPLUS (1907 TO DATE)
 1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> file caplus			
COST IN U.S. DOLLARS	SINCE FILE	TOTAL	
	ENTRY	SESSION	
FULL ESTIMATED COST	2.46	2.67	

FILE 'CAPLUS' ENTERED AT 12:27:00 ON 09 JUN 2008
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 FILE LAST UPDATED: 8 Jun 2008 (20080608/ED)

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```
=> s l1
L2          6966 L1

=> s uti or ("Urinary tract infection OR "Urinary system, disease" (L) "infection"))
          956 UTI
          265 UTIS
          1067 UTI
              (UTI OR UTIS)
          134293 URINARY
          149685 TRACT
          9059 TRACTS
          159681 TRACT
              (TRACT OR TRACTS)
          311782 INFECTION
          89121 INFECTIONS
          353990 INFECTION
              (INFECTION OR INFECTIONS)
```

```

4279 URINARY TRACT INFECTION
      (URINARY(W) TRACT(W) INFECTION)
134293 "URINARY"
2613379 "SYSTEM"
1413466 "SYSTEMS"
3535748 "SYSTEM"
      ("SYSTEM" OR "SYSTEMS")
1066657 "DISEASE"
289452 "DISEASES"
1194891 "DISEASE"
      ("DISEASE" OR "DISEASES")
2984 "URINARY SYSTEM, DISEASE"
      ("URINARY"(W) "SYSTEM"(W) "DISEASE")
311782 "INFECTION"
89121 "INFECTIONS"
353990 "INFECTION"
      ("INFECTION" OR "INFECTIONS")
1320 "URINARY SYSTEM, DISEASE" (L) "INFECTION"
L3 5127 UTI OR ((URINARY TRACT INFECTION OR "URINARY SYSTEM, DISEASE"
      (L) "INFECTION"))

```

```

=> s (urethritis OR "Urethra" (L) "disease, urethritis")
568 URETHRITIS
2739 "URETHRA"
47 "URETHRAS"
16 "URETHRAE"
2764 "URETHRA"
      ("URETHRA" OR "URETHRAS" OR "URETHRAE")
1066657 "DISEASE"
289452 "DISEASES"
1194891 "DISEASE"
      ("DISEASE" OR "DISEASES")
568 "URETHRITIS"
225 "DISEASE, URETHRITIS"
      ("DISEASE"(W) "URETHRITIS")
224 "URETHRA" (L) "DISEASE, URETHRITIS"
L4 568 (URETHRITIS OR "URETHRA" (L) "DISEASE, URETHRITIS")

```

```

=> s l2 and l3
L5 4 L2 AND L3

=> s l2 and l4
L6 0 L2 AND L4

```

```

=> d bib abd hitstr 1-4 L5
'ABD' IS NOT A VALID FORMAT FOR FILE 'CAPLUS'

```

The following are valid formats:

```

ABS ----- GI and AB
ALL ----- BIB, AB, IND, RE
APFS ----- AI, PRAI
BIB ----- AN, plus Bibliographic Data and PI table (default)
CAN ----- List of CA abstract numbers without answer numbers
CBIB ----- AN, plus Compressed Bibliographic Data
CLASS ----- IPC, NCL, ECLA, FTERM
DALL ----- ALL, delimited (end of each field identified)
DPAK ----- MAK, delimited for post-processing
FAM ----- AN, PI and PRAI in table, plus Patent Family data
FBIB ----- AN, BIB, plus Patent FAM
IND ----- Indexing data
IPC ----- International Patent Classifications
MAK ----- ALL, plus Patent FAM, RE
PAIS ----- PI, SO
SAM ----- CC, SX, TI, SI, IT
SCAN ----- CC, SX, TI, SI, IT (random display, no answer numbers;
      SCAN must be entered on the same line as the DISPLAY,
      e.g., D SCAN or DISPLAY SCAN)
STD ----- BIB, CLASS

IABS ----- ABS, indented with text labels
IALL ----- ALL, indented with text labels
IBIB ----- BIB, indented with text labels

```

IMAX ----- MAX, indented with text labels
 ISID ----- STD, indented with text labels
 OBIB ----- AN, plus Bibliographic Data (original)
 OIBIB ----- OBIB, indented with text labels
 SBIB ----- BIB, no citations
 SIBIB ----- IBIB, no citations
 HIT ----- Fields containing hit terms
 HITIND ----- IC, ICA, ICI, NCL, CC and index field (SI and IT)
 containing hit terms
 HITRN ----- HIT RN and its text modification
 HITSTR ----- HIT RN, its text modification, its CA index name, and
 its structure diagram
 HITSEQ ----- HIT RN, its text modification, its CA index name, its
 structure diagram, plus NTE and SEQ fields
 FHITSTR ----- First HIT RN, its text modification, its CA index name, and
 its structure diagram
 FHITSEQ ----- First HIT RN, its text modification, its CA index name, its
 structure diagram, plus NTE and SEQ fields
 KWIC ----- Hit term plus 20 words on either side
 OCC ----- Number of occurrence of hit term and field in which it occurs

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ENTER DISPLAY FORMAT (BIB):d bib abs hitstr 1-4 15
 'D' IS NOT A VALID FORMAT FOR FILE 'CAPLUS'

The following are valid formats:

ABS ----- GI and AB
 ALI ----- BIB, AB, IND, RE
 APPS ----- AL, PRAI
 BIB ----- AN, plus Bibliographic Data and PI table (default)
 CAN ----- List of CA abstract numbers without answer numbers
 CBIB ----- AN, plus Compressed Bibliographic Data
 CLASS ----- IPC, NCL, ECLA, FTERM
 DALL ----- ALL, delimited (end of each field identified)
 DMAX ----- MAX, delimited for post-processing
 FAM ----- AN, PI and PRAI in table, plus Patent Family data
 FBIB ----- AV, BIB, plus Patent FAM
 IND ----- Indexing data
 IPC ----- International Patent Classifications
 MAX ----- ALL, plus Patent FAM, RE
 PATS ----- PI, SO
 SAM ----- CC, SX, TI, ST, IT
 SCAN ----- CC, SX, TI, ST, IT (random display, no answer numbers;
 SCAN must be entered on the same line as the DISPLAY,
 e.g., D SCAN or DISPLAY SCAN)
 STD ----- BIB, CLASS
 IABS ----- ABS, indented with text labels
 IALL ----- ALL, indented with text labels
 IBIB ----- BIB, indented with text labels
 IMAX ----- MAX, indented with text labels
 ISID ----- STD, indented with text labels
 OBIB ----- AN, plus Bibliographic Data (original)
 OIBIB ----- OBIB, indented with text labels
 SBIB ----- BIB, no citations
 SIBIB ----- IBIB, no citations
 HIT ----- Fields containing hit terms

HITIND ----- IC, ICA, ICI, NCL, CC and index field (ST and IT) containing hit terms
 HITRN ----- HIT RN and its text modification
 HITSTR ----- HIT RN, its text modification, its CA index name, and its structure diagram
 HITSEQ ----- HIT RN, its text modification, its CA index name, its structure diagram, plus NTE and SEQ fields
 FHITSTR ----- First HIT RN, its text modification, its CA index name, and its structure diagram
 FHITSEQ ----- First HIT RN, its text modification, its CA index name, its structure diagram, plus NTE and SEQ fields
 KWIC ----- Hit term plus 20 words on either side
 OCC ----- Number of occurrence of hit term and field in which it occurs

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All of the formats (except for SAM, SCAN, HIT, HITIND, HITRN, HITSTR, FHITSTR, HITSEQ, FHITSEQ, KWIC, and OCC) may be used with DISPLAY ACC to view a specified Accession Number.

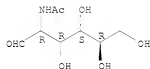
ENTER DISPLAY FORMAT (BIB):end

=> d bib abs hitstr 1-4 15

15 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 2003:721755 CAPLUS
 DN 139:359732
 TI Physiological studies of *Escherichia coli* strain MGI655: Growth defects and apparent cross-regulation of gene expression
 AU Souper, Eric; van Heeswijk, Wally C.; Plumbbridge, Jacqueline; Stewart, Valley; Bertenthal, Daniel; Lee, Haidy; Prasad, Gyaneshwar; Paliy, Oleg; Chazernnoppakul, Parinya; Kustu, Sydney
 CS Department of Plant and Microbial Biology, University of California, Berkeley, CA, 94720-3102, USA
 SO Journal of Bacteriology (2003), 185(18), 5611-5626
 CODEN: JOURBA; ISSN: 0021-9193
 PB American Society for Microbiology
 DT Journal
 LA English
 AB *Escherichia coli* strain MGI655 was chosen for sequencing because the few mutations it carries (ilvG rfb-50 rph-1) were considered innocuous. However, it has a number of growth defects. Internal pyrimidine starvation due to polarity of the rph-1 allele on pyrE was problematic in continuous culture. Moreover, the isolate of MGI655 obtained from the E. coli Genetic Stock Center also carries a large deletion around the fnr (fumarate-nitrate respiration) regulatory gene. Although studies on DNA microarrays revealed apparent cross-regulation of gene expression between galactose and lactose metabolism in the Stock Center isolate of MGI655, this was due to the occurrence of mutations that increased lacY expression and suppressed slow growth on galactose. The explanation for apparent cross-regulation between galactose and N-acetylglucosamine metabolism was similar. By contrast, cross-regulation between lactose and maltose metabolism appeared to be due to generation of internal maltosaccharides in lactose-grown cells and may be physiologically significant. Lactose is of restricted distribution; it is normally found together with maltosaccharides, which are starch degradation products, in the mammalian intestine. Strains designated MGI655 and obtained from other sources differed from the Stock Center isolate and each other in several respects. We confirmed that use of other E. coli strains with MGI655-based DNA microarrays works well, and hence these arrays can be used to study any strain of interest. The responses to nitrogen limitation of two urinary tract isolates and an intestinal commensal strain isolated recently from humans were remarkably similar to those of MGI655.
 IT 7512-17-6, N-Acetylglucosamine
 RL: BSU (Biological study, unclassified); BIOL (Biological study) (growth on; physiolo.; growth defects, mutations and apparent cross-regulation of gene expression in E. coli strain MGI655 (CGSC 6300))
 RN 7512-17-6 CAPLUS

CN D-Glucose, 2-(acetylamino)-2-deoxy- (CA INDEX NAME)

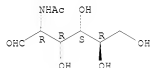
Absolute stereochemistry.



RE.CNT 60 THERE ARE 60 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1999:559350 CAPLUS
DN 131:198134
TI Composition of the sugar moiety of Tamm-Horsfall protein in patients with urinary diseases
AU Olczak, T.; Olczak, M.; Kubior, A.; Dulawa, J.; Kokot, F.
CS Inst. Biochem. Molecular Biol., Univ. Wrocław, Wrocław, 50137, Pol.
SO International Journal of Clinical & Laboratory Research (1999), 29(2), 68-74
CODEN: ICLREA; ISSN: 0940-5437
PB Springer-Verlag
DT Journal
LA English
AB The composition of Tamm-Horsfall protein (THP) glycans was examined in the urine of patients with urinary tract infection (group A), glomerulonephritis or interstitial nephritis (group B), and Bartter's syndrome (group C). THP of groups A, B, and C showed decreased amts. of N-acetylgalactosamine; this was reflected in lower reactivity with Phaseolus vulgaris lectin. Amts. of N-acetylglucosamine were reduced in groups A and B. Group A showed lower amts. of galactose and α ,6-linked sialic acid, as determined by reactivity with Datura stramonium lectin and Sambucus nigra lectin. In group C, there was a shift from tetrasialylated glycans towards less-sialylated chains. THP of all patients binds more strongly to IgG1.
IT 7512-17-6, N-Acetylglucosamine
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); BLOL (Biological study); OCCU (Occurrence)
(composition of the sugar moiety of Tamm-Horsfall protein in patients with urinary diseases)
RN 7512-17-6 CAPLUS
CN D-Glucose, 2-(acetylamino)-2-deoxy- (CA INDEX NAME)

Absolute stereochemistry.

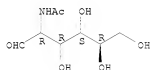


RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1997:730341 CAPLUS
DN 128:21297
TI N-glycosylated proteins are involved in efficient internalization of Klebsiella pneumoniae by cultured human epithelial cells
AU Fumagalli, Ornella; Tall, Ben D.; Schipper, Christiane; Gelschlaeger, Tobias A.
CS Inst. Molekulare Infektionsbiologie, Würzburg, D-97070, Germany
SO Infection and Immunity (1997), 65(11), 4445-4451
CODEN: INFIBR; ISSN: 0019-9567
PB American Society for Microbiology
DT Journal
LA English

- AB *Klebsiella pneumoniae* obtained from patients with urinary tract infections is able to invade cultured human epithelial cells. The internalization process is dependent upon both microfilamentous and microtubules. To better understand the interaction of these invasive bacteria with the host cell receptor(s), bladder, lung, and ileocecal epithelial cells were infected with *K. pneumoniae* in the presence of various lectins possessing multiple glycan specificities. It was found that the N-acetylglucosamine (GlcNAc)-specific lectins Con A, Datura stramonium agglutinin, and wheat germ agglutinin significantly inhibited the invasion of *K. pneumoniae* into these cells but did not interfere with the internalization of an invasive strain of *Salmonella typhimurium*. Conversely, internalization of *K. pneumoniae* but not *S. typhimurium* was also significantly inhibited when the bacteria were pretreated with α-NAC or chitin hydrolyzate, a GlcNAc polymer, prior to the gentamicin invasion assay. Other carbohydrates such as glucose, galactose, mannose, fucose, and N-acetylneuraminic acid had no inhibitory effects on *K. pneumoniae* uptake. Furthermore, internalization of *K. pneumoniae* but not *S. typhimurium* by HCT8 cells was also significantly inhibited when eukaryotic protein glycosylation was interrupted by tunicamycin or when host N-linked surface glycans were removed by pretreatment with N-glycosidase F. These studies suggest that a N-glycosylated protein receptor is involved in the internalization of *K. pneumoniae* by human epithelial cells in vitro. The results also indicate that internal GlcNAc residues might be a carbohydrate component of the receptor.
- IT 7512-17-6, N-Acetyl-D-glucosamine
 RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
 (N-glycosylated proteins are involved in efficient internalization of *Klebsiella pneumoniae* by cultured human epithelial cells)
- RN 7512-17-6 CAPLUS
 CN D-Glucose, 2-(acetylamino)-2-deoxy- (CA INDEX NAME)

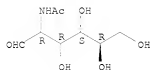
Absolute stereochemistry.



- RE.CNT 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT
- L5 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2008 ACS ON STN
 AN 1983:519254 CAPLUS
 DN 99:1131254
 CREF 99:183111a,18314a
 TI Novel cell-binding activity specific for N-acetyl-D-glucosamine in an *Escherichia coli* strain
 AU Vaisanen-Rhen, Vuokko; Korhonen, Timo K.; Finne, Jukka
 CS Dep. Gen. Microbiol., Univ. Helsinki, Helsinki, SF-00170/17, Finland
 SO FEBS Letters (1983), 159(1-2), 233-6
 CODEN: FEBLAL; ISSN: 0014-5793
 DI Journal
 LA English
 AB *E. coli* strains isolated from patients with different levels of urinary tract infection and from healthy persons were tested for their ability to hemagglutinate endo-β-galactosidase-treated human erythrocytes. Among the 104 strains studied, 1 revealed a strong agglutination reaction with the enzyme-treated erythrocytes. From the monosaccharides tested, N-acetyl-D-glucosamine inhibited agglutination most effectively. Orosomucoid and asialo-orosomucoid had no effect on the hemagglutination whereas β-galactosidase-treated asialo-orosomucoid was inhibitory. Apparently, the *E. coli* strain studied contains a novel cell-binding activity with specificity for terminal N-acetyl-D-glucosamine residues.
- IT 7512-17-6
 RL: PROC (Process)
 (binding of, by *Escherichia coli* strain, specificity of)
- RN 7512-17-6 CAPLUS

CN D-Glucose, 2-(acetylamino)-2-deoxy- (CA INDEX NAME)

Absolute stereochemistry.



=> s 12 and ((bacterial infection OR "infection" (L) "bacterial"))

292666 BACTERIAL

70 BACTERIALS

292713 BACTERIAL

(BACTERIAL OR BACTERIALS)

311782 INFECTION

89121 INFECTIONS

353990 INFECTION

(INFECTION OR INFECTIONS)

12069 BACTERIAL INFECTION

(BACTERIAL(W)INFECTION)

311782 "INFECTION"

89121 "INFECTIONS"

353990 "INFECTION"

("INFECTION" OR "INFECTIONS")

292666 "BACTERIAL"

70 "BACTERIALS"

292713 "BACTERIAL"

("BACTERIAL" OR "BACTERIALS")

44722 "INFECTION" (L) "BACTERIAL"

L7 74 L2 AND ((BACTERIAL INFECTION OR "INFECTION" (L) "BACTERIAL"))

=> d 60-74 bib abs L7

L7 ANSWER 60 OF 74 CAPLUS COPYRIGHT 2008 ACS ON STN

AN 1999:750810 CAPLUS

DN 13233425

TI Purification and characterization of a natural agglutinin from the serum of the hermit crab *Diogenes affinis*

AU Murali, Sathasivam; Mullaianadhan, Periasamy; Arumugam, Munusamy

CS Laboratory of Pathobiology, Department of Zoology, University of Madras, Madras, 600 025, India

SO *Biochimica et Biophysica Acta*, General Subjects (1999), 1472(1-2), 13-24

CODEN: BBGSEB; ISSN: 0304-4165

PB Elsevier B.V.

DI Journal

LA English

AB A natural agglutinin from the serum of the hermit crab *D. affinis* was purified to homogeneity by a single-step affinity chromatog. using N-acetylglucosamine-coupled Sepharose 6B. The purified serum agglutinin (PSA) showed a strong affinity for rat RBC, and its hemagglutinating (HA) activity was specifically dependent on Ca^{2+} and reversibly sensitive to EDTA. PSA in active form has a mol. mass estimate of 185 kDa and is composed of 4 non-identical subunits (51, 49, 42, and 39 kDa) cross-linked by interchain disulfide bonds. The homogeneity of PSA was corroborated by immunodiffusion and immunoelectrophoretic analyses using rabbit antiserum raised against the agglutinin. The antibodies in this antiserum appear to be specific for RBC-binding sites of the agglutinin mols. as revealed by the ability of the antiserum to neutralize HA activities of both whole serum and PSA of *D. affinis*. In HA-inhibition assays performed with several carbohydrates and glycoproteins, PSA showed a distinct and unique specificity for acetyl group in carbohydrates independently of the presence of this group on C-2 or C-5 and its stereochem. arrangement in the axial or equatorial orientation. Besides, this agglutinin appears to recognize the terminal N- and O- acetyl groups in the oligosaccharide chain of glycoconjugates. The HA activity of *D. affinis* agglutinin was also susceptible to inhibition by lipopolysaccharides from diverse Gram-neg. bacteria, which might indicate a significant *in vivo* role of this humoral agglutinin in the host immune response against

bacterial infections.

RE.CNT 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 61 OF 74 CAPLUS COPYRIGHT 2008 ACS ON STM
AN 1998:674540 CAPLUS
DN 130179597
TI Histochemical and lectin histochemical studies on nasal mucosa of pigs with or without respiratory diseases
AU Perfumo, Carlos J.; Mores, Nelson; Armocida, Armando D.; Piffer, Itamar A.; Massone, Adriana R.; Itagaki, Shin-ichi
CS Institute of Pathology, Faculty of Veterinary Sciences, La Plata National University, La Plata, 1900, Argent.
SO Journal of Veterinary Medical Science (1998), 60(9), 1021-1023
CODEN: JVMSEQ; ISSN: 0916-7250
PB Japanese Society of Veterinary Science
DT Journal
LA English
AB Histochem. and lectin histochem. exams. were carried out on nasal mucosa of pigs with or without respiratory diseases. Both acid and neutral mucins coexisted in nasal mucosa of normal pigs while acid sialomucins were mainly observed in nasal mucosa of pigs infected with Bordetella bronchiseptica and/or Pasteurella multocida. Lectin histochem. revealed that the nasal epithelial cells of normal pigs were rich in N-acetylglucosamine, fucose and N-acetylglucosamine residues which showed a tendency to disappear in porcine cytomegalovirus infection and to increase in atrophic rhinitis, resp.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 62 OF 74 CAPLUS COPYRIGHT 2008 ACS ON STM
AN 1998:214145 CAPLUS
DN 128:320025
TI Characterization of the carbohydrate moiety of intestinal mucin-type sialoglycoprotein receptors for the K88ac fimbrial adhesin of Escherichia coli
AU Grange, Philippe A.; Erickson, Alan K.; Anderson, Timothy J.; Francis, David H.
CS Department of Veterinary Science, South Dakota State University, Brookings, SD, 57007-1396, USA
SO Infection and Immunity (1998), 66(4), 1613-1621
CODEN: INFIBR; ISSN: 0019-9567
PB American Society for Microbiology
DT Journal
LA English
AB The authors have previously identified two mucin-type sialoglycoproteins from porcine intestinal epithelial cells with approx. mol. masses of 210 (intestinal mucin-type glycoprotein IMTGP-1) and 240 kDa (IMTGP-2) as receptors for the K88ab and K88ac fimbrial adhesins of Escherichia coli. These receptors are detected in intestinal brush border membrane preps. from pigs with adhesive phenotypes but not from pigs with nonadhesive phenotypes and are postulated to be important determinants of the susceptibility of pigs to K88ab- and K88ac- enterotoxigenic E. coli infections. Using exoglycosidase digestion studies, the authors have now determined that β -linked galactose is an important component in the recognition of IMTGP-1 and IMTGP-2 by the K88ac adhesin. In addition, the authors observed a differential distribution of the K88ac adhesin binding activity of IMTGP-1 and IMTGP-2 along the crypt-villus axis, suggesting that receptor activity is dependent on the maturation state of the intestinal epithelial cells. Brush borders from immature intestinal epithelial cells possessed the highest concns. of IMTGP-1 and IMTGP-2 receptor activity, with a progressive decrease in receptor activity as the cells mature. To characterize the differences in the carbohydrate moieties of IMTGP-1 and IMTGP-2, the authors developed a procedure for purifying the receptors, using phenol extraction followed by serial lectin affinity chromatog. Carbohydrate compositional anal. of the purified receptors indicated that the carbohydrate moieties of IMTGP-1 and IMTGP-2 consist of both N- and O-glycans containing galactose, glucose, sialic acid, mannose, N-acetylglucosamine, N-acetylglucosamine, and fucose. The major difference between the two receptors is that IMTGP-2 contains a higher percentage of monosaccharides (mannose and glucose) commonly found in N-glycans.

RE.CNT 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 63 OF 74 CAPLUS COPYRIGHT 2008 ACS ON STM
 AN 1998:178974 CAPLUS
 DN 128:262900
 TI Enzyme immunoassay kit for detecting antibodies to group-specific antigen of group A *Streptococcus* on the basis of conjugated N-acetylglucosamine and its medical application
 AU Briko, N. I.; Bovin, N. V.; Shevelev, B. I.; Dynga, L. O.; Blinnikova, E. I.; Kukryuk, P. P.; Myasodova, S. I.; Ambrosov, I. V.; Filatov, N. N.
 CS Inst. Biorg. Khim., Mosk. Med. Akad. im. Sechenova, Moscow, Russia
 SO Klinicheskiye Laboratornaya Diagnostika (1997), (9), 43-46
 CODEN: RLDIES; ISSN: 0869-2084
 PB Meditsina
 DT Journal
 LA Russian
 AB Enzyme immunoassay kit has been created for detecting antibodies to group A *Streptococcus*, based on N-acetylglucosamine. N-acetylglucosamine was selected as the group-specific determinant due to the structure of group A *Streptococcus* polysaccharide, in which this monosaccharide residue is lateral to the main polysaccharide chain and hence more available for antibodies. Water-soluble polyacrylamide is the carrier in this kit, for this carrier is stable and not prone to nonspecific reaction with proteins. In addition, the synthesis of polyacrylamide conjugates ensures reproducible results. Use of this kit permits the identification of group A streptococcal etiol. of the disease and thus carry out appropriate therapy; moreover, it helps predict the outcome of an acute streptococcal infection and detect the post-streptococcal complications in the early period of the disease.

L7 ANSWER 64 OF 74 CAPLUS COPYRIGHT 2008 ACS ON STM
 AN 1997:730341 CAPLUS
 DN 128:21297
 TI N-glycosylated proteins are involved in efficient internalization of *Klebsiella pneumoniae* by cultured human epithelial cells
 AU Fumagalli, Ornella; Tall, Ben D.; Schipper, Christiane; Gelschlaeger, Tobias A.
 CS Inst. Molekulare Infektionsbiologie, Wurzburg, D-97070, Germany
 SO Infection and Immunity (1997), 65(11), 4445-4451
 CODEN: INFIBR; ISSN: 0019-9567
 PB American Society for Microbiology
 DT Journal
 LA English
 AB *Klebsiella pneumoniae* obtained from patients with urinary tract infections is able to invade cultured human epithelial cells. The internalization process is dependent upon both microfilaments and microtubules. To better understand the interaction of these invasive bacteria with the host cell receptor(s), bladder, lung, and ileocecal epithelial cells were infected with *K. pneumoniae* in the presence of various lectins possessing multiple glycan specificities. It was found that the N-acetylglucosamine (GlcNAc)-specific lectins Con A, *Datura stramonium* agglutinin, and wheat germ agglutinin significantly inhibited the invasion of *K. pneumoniae* into these cells but did not interfere with the internalization of an invasive strain of *Salmonella typhimurium*. Conversely, internalization of *K. pneumoniae* but not *S. typhimurium* was also significantly inhibited when the bacteria were pretreated with GlcNAc or chitin hydrolyzate, a GlcNAc polymer, prior to the gentamicin invasion assay. Other carbohydrates such as glucose, galactose, mannose, fucose, and N-acetylneuraminic acid had no inhibitory effects on *K. pneumoniae* uptake. Furthermore, internalization of *K. pneumoniae* but not *S. typhimurium* by HCT8 cells was also significantly inhibited when eukaryotic protein glycosylation was interrupted by tunicamycin or when host N-linked surface glycans were removed by pretreatment with N-glycosidase F. These studies suggest that a N-glycosylated protein receptor is involved in the internalization of *K. pneumoniae* by human epithelial cells in vitro. The results also indicate that internal GlcNAc residues might be a carbohydrate component of the receptor.

RE.CNT 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 65 OF 74 CAPLUS COPYRIGHT 2008 ACS ON STM
 AN 1996:200816 CAPLUS
 DN 124:285738

OREF 124:52887a,52890a
 TI Role of cell-associated N-acetyl-D-glucosamine specific hemagglutinin in the adhesion of *Vibrio cholerae* O1 to rabbit intestinal epithelial cells in vitro
 AU Samal, D.; Guhathakurta, B.; Bhattacharya, S. K.; Pal, C. R.; Datta, A.
 CS National Institute of Cholera and Enteric Diseases P-33, C.I.T. Road, Scheme XM, Calcutta, 700 010, India
 SO FEMS Immunology and Medical Microbiology (1996), 13(2), 101-5
 CODEN: FIMIEV; ISSN: 0928-8244
 PB Elsevier
 DT Journal
 LA English
 AB Previously a N-acetyl-D-glucosamine specific cell-associated hemagglutinin (HA) has been purified from a *Vibrio cholerae* O1 strain. This study documents the role of this purified HA as an adhesin of *V. cholerae* O1. A significant inhibition in the adhesion of *V. cholerae* O1 bacterial cells to isolated rabbit intestinal brush borders (RIBB) was observed when the latter were pretreated with purified HA in ELISA. Antibody raised against purified HA and Fab (IgG) fragment of this serum inhibited adhesion of the bacteria to isolated rabbit intestinal epithelial cells (RIEC). *V. cholerae* O1 (both Ogawa and Inaba serovars) showed less adherence to isolated RIEC of animals immunized with the purified HA. Patients convalescing from *V. cholerae* O1 infection showed high ELISA titers against the purified HA indicating that it is expressed in the host during the disease process.

L7 ANSWER 66 OF 74 CAPLUS COPYRIGHT 2008 ACS ON STN
 AN 1992:639828 CAPLUS
 DN 117:239828

OREF 117:41365a,41368a
 TI Lectins as anti-infective agents
 IN Furstal, Arpad Janos
 PA Rowett Research Institute, UK
 SO PCT Int. Appl., 22 pp.
 CODEN: PIXMD2
 DT Patent
 LA English
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9210204	A1	19920625	WO 1991-GB2236	19911216
M: AU, CA, FI, JP, NO, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
CA 2098305	A1	19920615	CA 1991-2098305	19911216
AU 9190668	A	19920708	AU 1991-90668	19911216
EP 561912	A1	19930929	EP 1992-900831	19911216
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE				
JP 06504533	T	19940526	JP 1991-502133	19911216
GB 1993-02195	A	19901214		
WO 1991-GB2236	A	19911216		

AB A nontoxic lectin or lectin-carrying entity from plants is used for the prevention or treatment of bacterial infections and parasite infestation in animals. The lectins can be orally administered or fed to livestock to prevent infections. Antibacterial effects of *Phaseolus vulgaris* agglutinin and *Galanthus nivalis* agglutinin against *Escherichia coli* were tested with rats.

L7 ANSWER 67 OF 74 CAPLUS COPYRIGHT 2008 ACS ON STN
 AN 1991:530153 CAPLUS
 DN 115:130153

OREF 115:22177a,22180a
 TI Airway adherence of *Pseudomonas aeruginosa*: mucopolysaccharide binding to human and bovine airway proteins
 AU Hata, J. Steven; Fick, Robert B., Jr.
 CS Coll. Med., Univ. Iowa, Iowa City, IA, 52242, USA
 SO Journal of Laboratory and Clinical Medicine (1991), 117(5), 410-22
 CODEN: JLCMAN; ISSN: 0022-2143
 DT Journal
 LA English
 AB The ability of *P. aeruginosa* (PA) to adhere to cells of the upper and lower airways is considered the initial step in its colonization and subsequent infection. Many potential adhesins exist, but few eukaryote receptors have been reported. This study evaluates the

adherence of PA and the well-recognized adhesin mucocopolysaccharide, of the mucoid variant, to tracheal epithelial cells and airway secretions. A number of tools were used to systematically examine this process, each in increasing detail. SEM of infected tracheal cell monolayers showed that although nonmucoid PA adhered most often as individual organisms, mucoid strains frequently were adherent in the form of clusters of microcolonies. Partially purified mucocopolysaccharide was itself adherent to the tracheal cell monolayers. More quant. studies of ¹⁴C-labeled PA adherence to tracheal cell monolayers demonstrated that (1) bacterial adherence was temperature dependent; (2) mucoid PA was more adherent than nonmucoid PA; (3) proteinase treatment of the intact monolayers increased adherence of mucoid PA; and (4) adherence of nonmucoid PA was partially inhibited by pretreatment with N-acetylglucosamine, a normal constituent of airway mucus. These observations suggest that N-acetylglucosamine may play a role in the epithelial cell receptor for ligands on the surface of nonmucoid strains of PA. Pretreatment of mucoid PA with N-acetylglucosamine, D-arabinose, D-mannose, or N-acetylneuraminic acid did not affect adherence. Partially purified proteins isolated from the apical plasma membrane of bovine tracheal epithelial cells probed in a Western anal. with the ¹²⁵I-labeled PA mucocopolysaccharide revealed two binding proteins of 49,000 mol. weight and 104,000 mol. weight. Human airway secretions of patients with chronic PA infection were screened by the dot blot technique and demonstrated selective binding of mucocopolysaccharide ligand. Western anal. of these biol. important secretions revealed that PA mucocopolysaccharide bound to a 65,000 mol. weight protein in airway secretions of infected individuals. This glycoprotein is similar to a previously described cell receptor for bacterial type 1 fimbriae.

L7 ANSWER 69 OF 74 CAPLUS COPYRIGHT 2008 ACS ON STN

AN 1991:17359 CAPLUS

DN 114:17359

OREF 114:2957a,2960a

TI The role of lectins in respiratory infections

AU Luther, P.; Reutgen, H.; Noack, K.; Sehr, I.; Flemming, C.

CS Res. Inst. Lung Dis., Berlin-Buch, 1115, Ger. Dem. Rep.

SO Lectins: Biology, Biochemistry, Clinical Biochemistry (1990), 7, 267-90

CODEN: LBBBDS; ISSN: 0723-8878

DI Journal

LA English

AB Plant and bacterial lectins may play an important role in decreasing of respiratory infections. The potency of both to prevent lethal infections with *Streptococcus pneumoniae* ATCC 6301 was examined. The lectin from *Triticum vulgare* (WGA) applied orally was able to activate phagocytosis and to kill alveolar macrophages in vivo. The activation of resistance mechanisms against a normally lethal infection of *S. pneumoniae* in mice was strongly increased (2-5 times) by inoculation with a new polyvalent bacterial vaccine. Ineffective when compared to unvaccinated specimens. Using the same infection model the important role of bacterial lectins for infectious diseases was tested. Blockage of the combining site for the bacterial lectin of *S. pneumoniae*, by intranasal application of N-acetylglucosamine (the specific carbohydrate for the lectin), prevented a lethal infection with *S. pneumoniae* 3-fold greater than PBS or using nonlectin relevant carbohydrates. Therefore, blocking the lectin receptor with specific carbohydrates might also be of clin. relevance to prevent acute respiratory infections.

L7 ANSWER 69 OF 74 CAPLUS COPYRIGHT 2008 ACS ON STN

AN 1990:160931 CAPLUS

Correction of: 1987:536244

DN 112:160931

Correction of: 107:136244

OREF 112:27187a,27190a

TI Production of water-soluble chitin oligomers

IN Nishimura, Tsumumi; Eto, Eiichi; Yamada, Toyofumi

PA Tama Chemical Industry Co., Ltd., Japan

SO Eur. Pat. Appl., 11 pp.

CODEN: EPXXDW

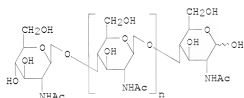
DI Patent

LA English

FAN.CNT 1

PATENT NO. KIND DATE APPLICATION NO. DATE

PI	EP 226452	A2	19870624	EP 1986-309609	19861210
	EP 226452	A3	19880803		
	EP 226452	B1	19921119		
	R, BE, CH, DE, ES, FR, GB, IT, LI, NL, SE				
	JP 62138496	A	19870622	JP 1985-278688	19851211
	JP 01053877	B	19891115		
	CA 1297832	C	19920324	CA 1986-524841	19861209
	DK 8605928	A	19870612	DK 1986-5928	19861210
	FI 8605024	A	19870612	FI 1986-5024	19861210
	FI 80713	B	19900330		
	FI 80713	C	19900710		
	NO 8604982	A	19870612	NO 1986-4982	19861210
	NO 167747	B	19910826		
	NO 167747	C	19911204		
	ES 2043604	T3	19940101	ES 1986-309609	19861210
	US 4804750	A	19890214	US 1986-940358	19861211
FRA1	JP 1985-278688	A	19851211		
GI					



AB The title oligomers I ($n = 2-4$), useful as immune adjuvants against bacterial and fungal infections and the growth of tumors (no data), are prepared by hydrolyzing finely ground chitin with an amount of concentrated hydrohalic acid containing 1.5-6 mol hydrogen halide per 100 g chitin, while irradiating with ultrasonic waves and mech. stirring. A reactor was charged with 100 g of finely ground chitin (particle size ≥ 16 mesh; from Chlonocetes japonicus) and 400 mL of 12N HCl, the mixture was irradiated with 300 W of 48 kHz ultrasonic irradiation and agitated with mech. stirring for 15 min at $<30^\circ$, the resulting homogeneous reaction mixture was further agitated at 40° for 2 h while ultrasonic radiation was continued, the hydrolyzed reaction mixture neutralized to pH 7 with aqueous NaOH, cooled, filtered, desalted by passing through a column (100 cm long, 10 cm in diameter) of Sephadex -25, and the combined effluent fractions were freeze-dried to give 36 g of a solid mixture comprising I ($n = 0-4$) and N-acetylglucosamine. This mixture was subjected to high-pressure liquid chromatog., producing I ($n = 4$) 3.10, I ($n = 3$) 7.6, and I ($n = 2$) 8.1 g.

L7 ANSWER 70 OF 74 CAPLUS COPYRIGHT 2008 ACS ON STN

AN 1989:152366 CAPLUS

DN 110:152366

OREF 110:25169a,25172a

TI Lectins and their role in a new polyvalent bacterial vaccine against ARI

AU Luther, P.; Noack, K.; Reutgen, H.

CS Res. Inst. Lung Dis., Berlin-Buch, 1113, Ger. Dem. Rep.

SO Zentralblatt fuer Bakteriologie, Mikrobiologie und Hygiene, Series A:

Medical Microbiology, Infectious Diseases, Virology, Parasitology (1988),

270(1-2), 16-21

CODEN: ZEMPEJ; ISSN: 0176-6724

DT Journal

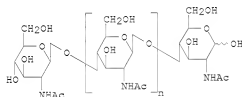
LA English

AB The potency of the polyvalent bacterial vaccine (Infectvac) to prevent lethal infections with *Streptococcus pneumoniae* ATCC 6301 was examined. NMRI-mice were protected 2-5 times better than untreated controls. Using the same infection model, the important role of bacterial lectins for infectious diseases was demonstrated. Blocking the combining site of the bacterial lectin of *S. pneumoniae* by intranasal application of N-acetylglucosamine (the specific carbohydrate for the lectin) was able to prevent a lethal infection with *S. pneumoniae* 3-times better than controls. Therefore, blocking the lectin receptor with specific carbohydrates might

also be of clin. relevance to prevent acute respiratory infections (ARI).

L7 ANSWER 71 OF 74 CAPLUS COPYRIGHT 2008 ACS ON STM
AN 1988:126674 CAPLUS
DN 108:126674
OREF 108:20665a,20668a
TI A 63 kDa toxic polypeptide from *Bacillus thuringiensis* subsp. *kurstaki* (HD-263): effects on several lepidopteran cell lines
AU McCarthy, William J.; Aronson, John N.; Lebenberg, Jim
CS Dep. Entomol., Pennsylvania State Univ., University Park, PA, 16802, USA
SO In Vitro Cellular & Developmental Biology (1988), 24(1), 59-64
CODEN: ICDDEO; ISSN: 0883-8364
DI Journal
LA English
AB An electrophoretically homogeneous 63 kilodalton (kDa) polypeptide derived from the protoxin of *B. thuringiensis* subsp. *kurstaki*; (HD-263) caused lysis of cells from the lepidopteran cell lines TN368, IPLB-HZ1075, LD652Y, and SF21AE. The extent of cytolysis among the different cell cultures varied according to the incubation milieu, the polypeptide, and the particular cell culture studied. Preincubation of the polypeptide with either the amino sugars galactosamine, mannosamine, glucosamine, or their N-acetyl derivs. prevented cytolysis to a varying extent. Derivs. of galactose were more effective than those of mannose, followed by those of glucose. The amino sugars inhibited more efficiently than the N-acetyl derivs. No inhibition was detected using the parent sugars. A baculovirus originally isolated from the lepidopteran *Autographa californica* was grown in TN368 cells and the extracellular virus (ECV) preincubated with varying concns. of the polypeptide before assay. A concentration of 5 µg/mL reduced viral infectivity 99% when assayed on TN368 cells. Evidently at least some *B. thuringiensis* toxins may utilize specific cell-surface glycoconjugates for initiation of their toxic action and the nos. and types of receptors may vary with the specific cell line. Also, reduction of baculovirus ECV infectivity by toxic polypeptide indicates binding to a cell-surface glycoconjugate essential for initiation of infection, whether it is the normal cell receptor or a virus-coded glycoconjugate.

L7 ANSWER 72 OF 74 CAPLUS COPYRIGHT 2008 ACS ON STM
AN 1987:536244 CAPLUS
DN 107:136244
OREF 107:22008a,22008a
TI Production of water-soluble chitin oligomers
IN Nishimura, Tatsuji; Eto, Eiichi; Yamada, Toyofumi
PA Ihara Chemical Industry Co., Ltd., Japan
SO Eur. Pat. Appl., 11 pp.
CODEN: EPKXDW
DI Patent
LA English
PATENT NO. _____ KIND _____ DATE _____ APPLICATION NO. _____ DATE _____
PI EP 226452 A2 19870624 EP 1986-309609 19861210
R: BE, CH, DE, ES, FR, GB, IT, LI, NL, SE
FRAI JF 1985-278688 19851211
GI



AB The title oligomers I ($n = 2-6$), useful as immune adjuvants against bacterial and fungal infections and the growth of tumors (no data), are prepared by hydrolyzing finely ground chitin with an amount of concentrated hydrohalic acid containing 1.5-6 mol hydrogen halide per 100 g chitin, while irradiating with ultrasonic waves and mech. stirring. A reactor was

charged with 100 g of finely ground chitin (particle size ≥ 16 mesh; from *Chionocetes japonicus*) and 400 mL of 12N HCl, the mixture was irradiated with 300 W of 48 kHz ultrasonic irradiation and agitated with mech. stirring for 15 min at $<30^\circ$, the resulting homogeneous reaction mixture was further agitated at 40° for 2 h while ultrasonic radiation was continued, the hydrolyzed reaction mixture neutralized to pH 7 with aqueous NaOH, cooled, filtered, desalted by passing through a column (100 cm long, 10 cm in diameter) of Sephadex G-25, and the combined effluent fractions were freeze-dried to give 36 g of a solid mixture comprising I (n = 0-4) and N-acetylglucosamine. This mixture was subjected to high-pressure liquid chromatog., producing I (n = 4) 3.10, I (n = 3) 7.6, and I (n = 2) 8.1 g.

L7 ANSWER 73 OF 74 CAPLUS COPYRIGHT 2008 ACS ON STN

AN 1985:575309 CAPLUS

DN 103:175309

ORF 103:28139A,28142A

TI Kinetic and chemical analyses of the biologic significance of lipoteichoic acids in mediating adherence of serotype III group B streptococci

AU Nealon, Timothy J.; Mattingly, Stephen J.

CS Health Sci. Cent., Univ. Texas, San Antonio, TX, 78284, USA

SO Infection and Immunity (1985), 50(1), 107-15

CODEN: INFIBR, ISSN: 0019-9567

DT Journal

LA English

AB The mechanism(s) involved in the binding of lipoteichoic acid (LTA), isolated from virulent, asymptomatic, or avirulent serotype III strains of group B streptococci, to human embryonic epithelial cells (HEC), human fetal epithelial cells (HFC), and human adult buccal epithelial cells was investigated. It was determined that the binding of purified [35 S]LTA to human adult buccal epithelial cells differed from the binding to HEC and HFC. LTA from all group B streptococcus strains bound to human adult buccal epithelial cells in a similar manner and was enhanced by the lipid portion of the polymer; in contrast, [35 S]LTA binding to HEC and HFC was mediated by hydrophobic as well as specific interactions due to the glycerolphosphate backbone of LTA. Binding avidity of the LTAs to HEC and HFC varied depending on the bacterial strain. Polymers from asymptomatic and avirulent strains were easily dissociated from cell surfaces with unlabeled virulent LTA through competitive interactions; however, 10-fold greater levels of the same material were required to displace virulent [35 S]LTA from HEC and HFC surfaces. These observed differences in binding avidity were shown to be due to longer LTA chains (30 to 35 glycerolphosphate units) in virulent strains when compared with LTA chains (10 to 12 glycerolphosphate units) of asymptomatic and avirulent strains. Thus, LTA appears to enhance the ability of virulent group B streptococci to bind to HEC and HFC with stronger avidity by virtue of the increased length of the cell-associated polymers synthesized by these strains. Mild enzymic treatment of HEC and HFC with trypsin or periodate abolished LTA binding, which suggests the presence of a certain glycoprotein receptor(s) for LTA which does not appear to be present on human adult buccal epithelial cells. These data may therefore partially explain the increased susceptibility of newborn infants to group B streptococcal infections.

L7 ANSWER 74 OF 74 CAPLUS COPYRIGHT 2008 ACS ON STN

AN 1983:32822 CAPLUS

DN 98:32822

ORF 98:3149A,3152A

TI Specificity of Japanese horseshoe crab lectin prepared by chitin adsorbent

AU Matsumoto, I.; Yamaguchi, H.; Sano, N.; Shibata, Y.; Okuyama, T.

CS Fac. Sci., Ochanomizu Univ., Tokyo, 112, Japan

SO Chitin Chitosan, Proceeding Int. Conf., 2nd (1982), 165-70. Editor(s):

Hirano, Shigehiro; Tokura, Seichi. Publisher: Jpn. Soc. Chitin Chitosan,

Tottori, Japan.

CODEN: 48XNAL

DT Conference

LA English

AB The lectin of the hemolymph of the Japanese horseshoe crab (*Tachypleus tridentatus* agglutinin, TTA) was purified by specific adsorption on a chitin column and subsequent specific elution with N-acetyl-D-glucosamine. The fluorescence of TTA, which was centered at 335 nm and was characteristic of the tryptophanyl residue, was enhanced upon interaction with specific sugars. The association consts. of TTA with specific sugars,

which were calculated from the changes in intensities of fluorescence difference spectra induced by the sugars, were in good agreement with the results of hemagglutination inhibition test. N-Acetylneuraminic acid and N-acetylmuramic acid had the highest association constant among monosaccharides, and colominic acid and hyaluronic acid had the highest constant among polysaccharides tested. The results indicate that TTA strongly recognizes the N-acetyl group and probably the carboxyl group in the sugar mol. TTA agglutinated not only human erythrocytes but also *Micrococcus lysodeikticus*. Despite the lack of bacteriolysis activity as lysozyme, TTA may have an immunol. role against the bacterial infection.

=> s chitin and l3
17888 CHITIN
322 CHITINS
17904 CHITIN
(CHITIN OR CHITINS)
L8 3 CHITIN AND L3

=> s chitin and l4
17888 CHITIN
322 CHITINS
17904 CHITIN
(CHITIN OR CHITINS)
L9 0 CHITIN AND L4

=> d bib abs 1-3 l8

L8 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2005:1290207 CAPLUS
DN 144:27596
TI Taurolidine formulations for antimicrobial protection against bacterial biofilm formation
IN Polaschegg, Hans-Dietrich
PA Austria
SO PCT Int. Appl., 75 pp.
CODEN: PIXX22
DI Patent
LA English
FAN.CWT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005115357	A2	20051208	WO 2005-EP5438	20050516
WO 2005115357	A3	20060511		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, ME, MK, MN, MW, MX, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SV, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
JP 200733200	T	20071220	JP 2007-512125	20050516
PRAI US 2004-571272P	P	20040514		
WO 2005-EP5438	W	20050516		

AB Localized bacterial infection can be treated by locally applying e.g., taurolidine gels, suspensions or thixotropic gels to the infection. A device for insertion into the body comprises taurolidine to render the device infection resistant. A method for treating blood, comprises removing blood from the body, treating the blood with taurolidine, and returning the treated blood.

L8 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2000:84585 CAPLUS
DN 132:127741
TI Suppository formulations comprising anionic polysaccharide
IN Santar, Ivan; Kiss, Frantisek; Briestensky, Jiri
PA Alpenstock Holdings Limited, Ire.

SO PCT Int. Appl., 43 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 FAN.CNT 8

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000004877	A1	20000203	WO 1999-IE71	19990721
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MM, MO, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, SV, TH, TM, TR, TT, UA, UG, UZ, VC, VE, YU, ZA, ZM, ZW, AB, AC, AD, AE, AF, AG, AI, AJ, AK, AL, AM, AN, AO, AP, AQ, AR, AS, AT, AU, AV, AW, AX, AY, AZ, BA, BB, BC, BD, BE, BF, BG, BH, BI, BJ, BK, BL, BM, BN, BO, BP, BQ, BR, BS, BT, BU, BV, BW, BY, BZ, CA, CB, CC, CD, CE, CF, CG, CH, CI, CJ, CK, CL, CM, CN, CO, CP, CQ, CR, CS, CT, CU, CV, CW, CX, CY, CZ, DA, DB, DD, DE, DF, DG, DH, DI, DJ, DK, DL, DM, DN, DO, DP, DQ, DR, DS, DT, DU, DV, DW, DX, DY, DZ, EA, EB, EC, ED, EE, EF, EG, EH, EI, EJ, EK, EL, EM, EN, EO, EP, EQ, ER, ES, ET, EU, EV, EW, EX, EY, EZ, FA, FB, FC, FD, FE, FF, FG, FH, FI, FJ, FK, FL, FM, FN, FO, FP, FQ, FR, FS, FT, FU, FV, FW, FX, FY, FZ, GA, GB, GC, GD, GE, GF, GH, GI, GJ, GK, GL, GM, GN, GO, GP, GQ, GR, GS, GT, GU, GV, GW, GX, GY, GZ, HA, HB, HC, HD, HE, HF, HG, HH, HI, HJ, HK, HL, HM, HN, HO, HP, HQ, HR, HS, HT, HU, HV, HW, HX, HY, HZ, IA, IB, IC, ID, IE, IF, IG, IH, II, IJ, IK, IL, IM, IN, IO, IP, IQ, IR, IS, IT, IU, IV, IW, IX, IY, IZ, JA, JB, JC, JD, JE, JF, JG, JH, JI, JJ, JK, JL, JM, JN, JO, JP, JQ, JR, JS, JT, JU, JV, JW, JX, JY, JZ, KA, KB, KC, KD, KE, KF, KG, KH, KI, KJ, KK, KL, KM, KN, KO, KP, KQ, KR, KS, KT, KU, KV, KW, KX, KY, KZ, LA, LB, LC, LD, LE, LF, LG, LH, LI, LJ, LK, LM, LN, LO, LP, LQ, LR, LS, LT, LU, LV, LW, LX, LY, LZ, MA, MB, MC, MD, ME, MF, MG, MH, MI, MJ, MK, ML, MM, MN, MO, MP, MQ, MR, MS, MT, MU, MV, MW, MX, MY, MZ, NA, NB, NC, ND, NE, NF, NG, NH, NI, NJ, NK, NL, NM, NN, NO, NP, NQ, NR, NS, NT, NU, NV, NW, NX, NY, NZ, OA, OB, OC, OD, OE, OF, OG, OH, OI, OJ, OK, OL, OM, ON, OO, OP, OQ, OR, OS, OT, OU, OV, OW, OX, OY, OZ, PA, PB, PC, PD, PE, PF, PG, PH, PI, PJ, PK, PL, PM, PN, PO, PP, PQ, PR, PS, PT, PU, PV, PW, PX, PY, PZ, QA, QB, QC, QD, QE, QF, QG, QH, QI, QJ, QK, QL, QM, QN, QO, QP, QQ, QR, QS, QT, QU, QV, QW, QX, QY, QZ, RA, RB, RC, RD, RE, RF, RG, RH, RI, RJ, RK, RL, RM, RN, RO, RP, RQ, RR, RS, RT, RU, RV, RW, RX, RY, RZ, SA, SB, SC, SD, SE, SF, SG, SH, SI, SJ, SK, SL, SM, SN, SO, SP, SQ, SR, SS, ST, SU, SV, SW, SX, SY, SZ, TA, TB, TC, TD, TE, TF, TG, TH, TI, TJ, TK, TL, TM, TN, TO, TP, TQ, TR, TS, TT, TU, TV, TW, TX, TY, TZ, UA, UB, UC, UD, UE, UF, UG, UH, UI, UJ, UK, UL, UM, UN, UO, UP, UQ, UR, US, UT, UU, UV, UW, UX, UY, UZ, VA, VB, VC, VD, VE, VF, VG, VH, VI, VJ, VK, VL, VM, VN, VO, VP, VQ, VR, VS, VT, VU, VV, VW, VX, VY, VZ, WA, WB, WC, WD, WE, WF, WG, WH, WI, WJ, WK, WL, WM, WN, WO, WP, WQ, WR, WS, WT, WU, WV, WW, WX, WY, WZ, XA, XB, XC, XD, XE, XF, XG, XH, XI, XJ, XK, XL, XM, XN, XO, XP, XQ, XR, XS, XT, XU, XV, XW, XX, XY, XZ, YA, YB, YC, YD, YE, YF, YG, YH, YI, YJ, YK, YL, YM, YN, YO, YP, YQ, YR, YS, YT, YU, YV, YW, YX, YY, YZ, ZA, ZB, ZC, ZD, ZE, ZF, ZG, ZH, ZI, ZJ, ZK, ZL, ZM, ZN, ZO, ZP, ZQ, ZR, ZS, ZT, ZU, ZV, ZW, ZX, ZY, ZZ				
	WU: 9950621	A	20000214	AU 1999-50621	19990721
	ES 2216543	T3	20041016	ES 1999-935016	19990721
	ZA 2001000514	A	20010829	ZA 2001-514	20010118
FRAI	IE 1998-594	A	19980721		
	IE 1998-595	A	19980721		
	IE 1998-596	A	19980721		
	IE 1998-597	A	19980721		
	IE 1998-598	A	19980721		
	IE 1998-599	A	19980721		
	WO 1999-IE71	W	19990721		
AB	A suppository formulation for rectal or vaginal administration includes a biocompatible anionic polysaccharide material wherein at least 5 % of the basic structural units of the polysaccharide are glucuronic acid. Oxidized linters were hydrolyzed and treated with gelatins to obtain an internal complex. The complex was mixed with gelatins, glycerol, propylene glycol, nitrofurantoin, and chlorhexidine and the resulting mixture was cast into a blister foil serving as the suppository packaging.				
RE.CNT 9	THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD				
	ALL CITATIONS AVAILABLE IN THE RE FORMAT				

L8 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN
 AN 1997:730341 CAPLUS
 DN 128:21297

TI N-glycosylated proteins are involved in efficient internalization of *Klebsiella pneumoniae* by cultured human epithelial cells
 AU Fumagalli, Ornella; Tall, Ben D.; Schipper, Christiane; Gelschlaeger, Tobias A.

CU Inst. Molekulare Infektionsbiologie, Wurzburg, D-97070, Germany
 SO Infection and Immunity (1997), 65(11), 4445-4451
 CODEN: INFIBR; ISSN: 0019-9567

PB American Society for Microbiology
 DT Journal
 LA English

AB *Klebsiella pneumoniae* obtained from patients with urinary tract infections is able to invade cultured human epithelial cells. The internalization process is dependent upon both microfilaments and microtubules. To better understand the interaction of these invasive bacteria with the host cell receptor(s), bladder, lung, and ileocecal epithelial cells were infected with *K. pneumoniae* in the presence of various lectins possessing multiple glycan specificities. It was found that the N-acetylglucosamine (GlcNAc)-specific lectins Con A, Datura stramonium agglutinin, and wheat germ agglutinin significantly inhibited the invasion of *K. pneumoniae* into these cells but did not interfere with the internalization of an invasive strain of *Salmonella typhimurium*. Conversely, internalization of *K. pneumoniae* but not *S. typhimurium* was also significantly inhibited when the bacteria were pretreated with GlcNAc or chitin hydrolyzate, a GlcNAc polymer, prior to the gentamicin invasion assay. Other carbohydrates such as glucose, galactose, mannose, fucose, and N-acetylneuraminic acid had no inhibitory effects on *K. pneumoniae* uptake. Furthermore, internalization of *K. pneumoniae* but not *S. typhimurium* by HCT8 cells was also significantly inhibited when eukaryotic protein glycosylation was interrupted by tunicamycin or when host N-linked surface glycans were removed by pretreatment with N-glycosidase F. These studies suggest that a N-glycosylated protein receptor is involved in the internalization of *K. pneumoniae* by human epithelial cells in vitro. The results also indicate that internal GlcNAc residues might be a carbohydrate component of the receptor.

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RE.CNT 44 THERE ARE 44 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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(FILE 'HOME' ENTERED AT 12:26:02 ON 09 JUN 2008)

FILE 'REGISTRY' ENTERED AT 12:26:23 ON 09 JUN 2008

L1 E 7512-17-6/RN
1 S E3

FILE 'CAPLUS' ENTERED AT 12:27:00 ON 09 JUN 2008

L2 6966 S L1
E URINARY TRACT INFECTION+ALL/CT
L3 5127 S UTI OR ((URINARY TRACT INFECTION OR "URINARY SYSTEM, DISEASE"
E URETHRITIS+ALL/CT
L4 568 S (URETHRITIS OR "URETHRA" (L) "DISEASE, URETHRITIS")
L5 4 S L2 AND L3
L6 0 S L2 AND L4
E BACTERIA+ALL/CT
E BACTERIAL INFECTION+ALL/CT
L7 74 S L2 AND ((BACTERIAL INFECTION OR "INFECTION" (L) "BACTERIAL"))
L8 3 S CHITIN AND L3
L9 0 S CHITIN AND L4